



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,938	09/01/2006	Sebastien Bardon	0543-1009	4642

466 7590 12/16/2010  
YOUNG & THOMPSON  
209 Madison Street  
Suite 500  
Alexandria, VA 22314

EXAMINER
----------

SHUMATE, ANTHONY R

ART UNIT	PAPER NUMBER
----------	--------------

1775

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

12/16/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,938	<b>Applicant(s)</b> BARDON ET AL.	
	<b>Examiner</b> ANTHONY SHUMATE	<b>Art Unit</b> 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18, 22-25, 27, 29, 30, 34-36, 38, 39, 41 and 42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18, 22-25, 27, 29, 30, 34-36, 38, 39, 41 and 42 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 19 November 2010 has been entered.

### ***Response to Amendment***

2. The Amendment filed 19 November 2010 has been entered and fully considered.
3. Claims 18, 22-25, 27, 29, 30, 34-36, 38, 39, 41 and 42 are pending, of which claims 18, 29, 30, 34, 36 and 41 were amended and claim 42 is new.
4. The previous claim objection particularly with regard to the use of a comma is withdrawn in light of Applicant's amendments to the claims.
5. The previous 35 USC 112 first paragraph rejection of claim 29 with regard to a plug and an extrusion die is withdrawn in light of Applicant's amendments to the claims.
6. The previous 35 USC 112 first paragraph rejection of claim 30 with regard to a die and a reinforcement is withdrawn in light of Applicant's amendments to the claims.
7. The previous 35 USC 112 first paragraph rejection of claim 34 with regard to a die and a reinforcement is withdrawn in light of Applicant's amendments to the claims.

Art Unit: 1775

8. The previous 35 USC 112 second paragraph rejection of claim 29 with regard to a plug and an extrusion die is withdrawn in light of Applicant's amendments to the claims.

9. The previous 35 USC 112 second paragraph rejection of claim 30 with regard to a die and a reinforcement is withdrawn in light of Applicant's amendments to the claims.

10. The previous 35 USC 112 second paragraph rejection of claim 34 with regard to a die and a reinforcement is withdrawn in light of Applicant's amendments to the claims.

### ***Claim Objections***

11. Claim 30 objected to because of the following informalities:

With regard to instant claim 30, the phrase "said structure comprising said reinforcement," is repetitive since the claim already has such a limitation.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1775

13. Claim 18, 22-25, 27, 35, 36, 38, 39, 41, and 42 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In regard to instant claim 18, the original disclosure does not provide support for the phrase, "wherein the transverse cross-section of the channels is not square shaped."

In regard to Applicant's statement in the correspondence dated 19 November 2010 at page 9 fourth paragraph that, "the amendments to claim 18 find support at least in former claim 21," it is noted that the original claims do not contain a claim 21. So, support cannot be found at claim 21.

The limitations of claim 36 were not supported by the original disclosure.

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1775

15. Claims 18, 22-25, 27, 29, 30, 34-36, 38, 39, 41 and 42 rejected under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 has the first phrase "the channel" in the second phrase, "wherein the transverse cross-section of the channels is not square shaped." There is insufficient antecedent basis for the first phrase in the claim.

Instant claim 18 has the phrases, "channels being bounded by a side wall," and "a first portion of the side wall of at least one of said channels, called 'reinforced channel,' comprises a reinforcement compared to remaining portions of said side wall," which are inconsistent with the original disclosure. Instant figure 4 has "channels being bounded by side walls," not "a side wall." As well, instant figure 4 has, "a side wall of at least one of said channels with a reinforcement compared to remaining side walls," not "a first portion of the side wall of at least one of said channels, called 'reinforced channel,' comprises a reinforcement compared to remaining portions of said side wall." Therefore, the claim 18 is inconsistent when compared to the claim 4, thereby providing an indefiniteness issue.

Also, the claim is unclear when compared to the specification, and this confusion appears to be substantially the result of the use of the phrase, "side wall."

Also, it is noted that the Applicant has the phrase “side walls,” at claim 40 filed 5 May 2010.

Instant claims 29, 30 and 34 have the phrases, “channels being bounded by a side wall,” and “a first portion of the side wall of at least one of said channels, called ‘reinforced channel,’ comprises a reinforcement compared to the rest of said side wall forming a second portion of said side wall,” which are inconsistent with the original disclosure. Instant figure 4 has “channels being bounded by side walls,” not “a side wall.” As well, instant figure 4 has, “a side wall of at least one of said channels with a reinforcement compared to remaining side walls,” not “a first portion of the side wall of at least one of said channels, called ‘reinforced channel,’ comprises a reinforcement compared to remaining portions of said side wall.” Therefore, the claims 29, 30 and 34 are inconsistent when compared to the claim 4, thereby providing an indefiniteness issue.

Also, the claims are unclear when compared to the specification, and this confusion appears to be substantially the result of the use of the phrase, “side wall.”

Also, it is noted that the Applicant has the phrase “side walls,” at claim 40 filed 5 May 2010.

Claim 30 recites the limitation "filter block" in said filter block. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 18, 22-25, 27, 29, 35, 36, 38, 39, 41 and 42 rejected under 35 U.S.C. 102(b) as anticipated by HASHIMOTO et al. (JP 2003/010616) ("HASHIMOTO") or, in the alternative, under 35 U.S.C. 103(a) as obvious over HASHIMOTO et al. (JP 2003/010616) ("HASHIMOTO") in view of Applicant's admission. (As evidenced by MATSUBARA et al. (US 6,060,148) ("MATSUBARA"))



For convenience the HASHIMOTO et al. (US 7,037,567 B2) will be used for reference as an official translation of HASHIMOTO et al. (JP 2003/010616).

For instant claim 18, HASHIMOTO teaches particularly at the figures particularly figures 1(a) and 1(b) a plurality of one-piece blocks (2).

Also for instant claim 18, HASHIMOTO teaches particularly at the figures and column 7 lines 14-17 adhesive (i.e. seals) assembled with the blocks (2).

Also for instant claim 18, HASHIMOTO teaches particularly at the figures and column 7 lines 23-25 the Si content of the adhesive, specified by  $\text{Si}/(\text{Si}+\text{SiC})$  is higher than that of the honeycomb segment (i.e. a nature of a material of said seals being different from a nature of a material of said blocks).

Also for instant claim 18, HASHIMOTO teaches particularly at the figures and column 1 lines 1-10 and column 8 lines 47-51 a plurality of the blocks (2) each comprising a plurality of flow channels for the exhaust gases, each of the channels being bounded by a side wall, a plug and an opening terminating outwardly.

Also for instant claim 18, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 a first portion (14) of the side wall of a channel (i.e. reinforced channel) has a reinforcement compared to remaining portions of the side wall that form a second portion (10) of the side wall.

Also for instant claim 18, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 a ratio of a thickness of the first portion (14) to a thickness of the second portion (10), in a transverse plane of section.

HASHIMOTO does not specifically teach a ratio of a thickness of said first portion to a thickness of said second portion, in a transverse plane of section, being always between 1.1 and 3

But, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 a ratio of a thickness of the first portion (14) to a thickness of the second portion (10) , in a transverse plane of section, being always between 1.5 to 5 times.

It is the Examiner's position that the range of 1.5 to 5 overlaps the claimed range of between 1.1 and 3, thereby providing a case of anticipation. (MPEP 2131.02 PART II)

Alternatively, it is the Examiner's position that the range of 1.5 to 5 overlaps the claimed range of between 1.1 and 3, thereby providing a prima facie case of obviousness. (MPEP 2144.05 PART I)

Also for instant claim 18, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 the filter body has a plurality of adjacent reinforced channels arranged so that each first portion of the reinforced channels form a continuous reinforcing partition (14).

As well, it is the Examiner's position that the thickness of said reinforcing partition of HASHIMOTO is substantially constant. Additionally, it is the Examiner's position that the reinforcement is substantially constant of HASHIMOTO for all the reinforced channels of a group in any transverse plane of section.

Alternatively, Applicant admits on the record at page 1 lines 25-26 of the instant specification, "Conventionally, all the partitions of the two sets have the same thickness, that is, the side wall 22 of any channel 14 has a constant thickness."

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the thickness of the reinforcing partition of HASHIMOTO is substantially constant, and the reinforcement is substantially constant of HASHIMOTO for all the reinforced channels of a group in any transverse plane of section, since it was known in the art that conventionally the side wall (22) of any channel (14) has a constant thickness as admitted by Applicant on the record at page 1 lines 25-26 of the instant specification.

The Examiner notes the instant figure 4,

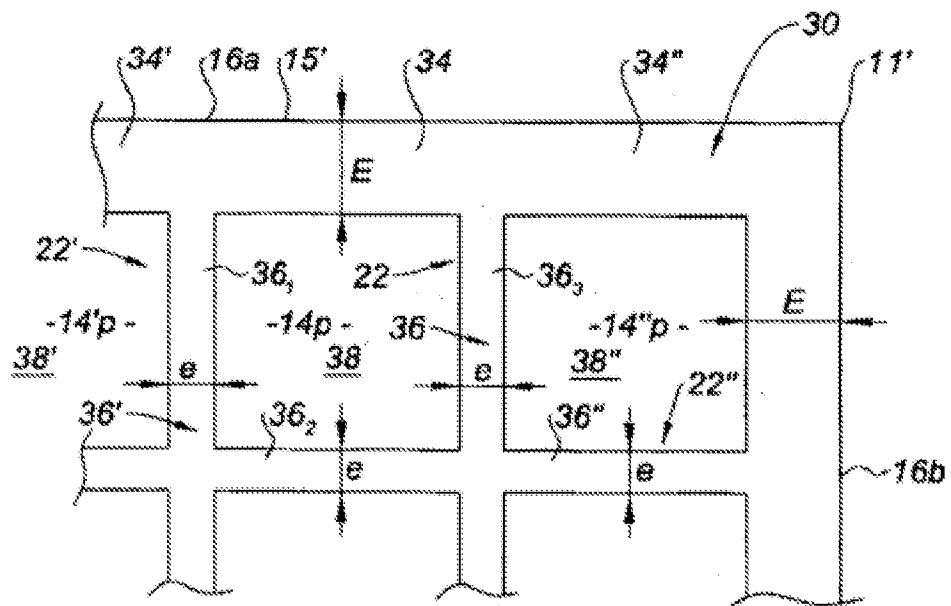
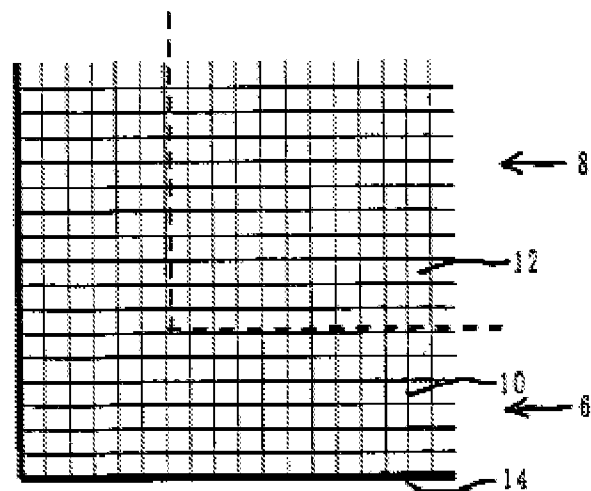


Fig. 4

and figure 5 of HASHIMOTO

FIG. 5



Also for instant claim 18, HASHIMOTO teaches particularly at the figures wherein the transverse cross-section of the channels is not square shaped.

Also for instant claim 18, HASHIMOTO teaches particularly at figure 5 and column 5 lines 22-33 wherein the first portion comprises an external face defining an exterior of the block.

Also for instant claim 18, HASHIMOTO teaches particularly at figure 5 wherein the thickness of internal portions of the side walls of peripheral channels of said blocks is identical to a thickness of walls of internal channels of the blocks.

[For extrinsic evidence, MATSUBARA teaches particularly at the abstract, the figures, figure 6, table 1, comparative example 7 and inventive example 3 wherein the thickness of the outer peripheral wall is greater than the thickness of the other cell wall (i.e. a first portion of the side wall of a channel comprises a reinforcement compared to the rest of the side wall forming a second portion of the side wall). Also, MATSUBARA teaches particularly at figure 6, table 1, comparative example 7 and comparative examples 9-12 and invention example 7-10 that if the thickness of the outer peripheral wall is greater than the thickness of the cell wall in outer peripheral portion the ceramic honeycomb body has no chipping.]

For instant claim 22, HASHIMOTO teaches particularly at figure 5 and column 5 lines 22-33 wherein channels with the reinforcement (14) (i.e. the reinforced channels of the group) are arranged so that the reinforcing partition (14) overlaps a longitudinal edge of the filter block (2).

For instant claim 23, HASHIMOTO teaches particularly at figure 5 and column 5 lines 22-33 wherein channels with the reinforcement (14) (i.e. the group of reinforced channels) comprises all peripheral channels of the block (2) so that the reinforcing partition surrounds the block (2), so that the reinforcing partition (14) is at an external surface of the block (2).

For instant claim 24, HASHIMOTO teaches particularly at figure 5 and column 5 lines 22-33 a ratio of a thickness of the first portion (14) to a thickness of the second portion (10) , in a transverse plane of section, being always between 1.5 to 5 times.

It is the Examiner's position that the ratio of HASHIMOTO is constant irrespective of the transverse plane of section considered.

Alternatively, Applicant admits on the record at page 1 lines 25-26 of the instant specification, "Conventionally, all the partitions of the two

sets have the same thickness, that is, the side wall 22 of any channel 14 has a constant thickness.”

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the thickness of the side walls of the channels (10) of HASHIMOTO is constant, and the thickness of the reinforcing partition (14) of HASHIMOTO is constant (i.e. wherein the ratio is constant irrespective of the transverse plane of section considered), since it was known in the art that conventionally the side wall (22) of any channel (14) has a constant thickness as admitted by Applicant on the record at page 1 lines 25-26 of the instant specification.

For instant claim 25, HASHIMOTO teaches at the figures particularly figure 5 and column 5 lines 22-33 a reinforcement (14) of the block (2).

It is the Examiner's position that the reinforcement (14) of HASHIMOTO is substantially constant in any longitudinal plane of section of the block (2).

Alternatively, Applicant admits on the record at page 1 lines 25-26 of the instant specification, “Conventionally, all the partitions of the two sets have the same thickness, that is, the side wall 22 of any channel 14 has a constant thickness.”

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the thickness of the reinforcing

Art Unit: 1775

partition (14) of HASHIMOTO is substantially constant (i.e. wherein the reinforcement is substantially constant in any longitudinal plane of section of the block), since it was known in the art that conventionally the side wall (22) of any channel (14) has a constant thickness as admitted by Applicant on the record at page 1 lines 25-26 of the instant specification.

For instant claim 27, HASHIMOTO does not specifically teach the ratio is between 1.9 and 2.1

But, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 a ratio of a thickness of the first portion (14) to a thickness of the second portion (10) being between 1.5 to 5 times.

It is the Examiner's position that the range of 1.5 to 5 overlaps the claimed range of between 1.9 and 2.1, thereby providing a case of anticipation. (MPEP 2131.02 PART II)

Alternatively, it is the Examiner's position that the range of 1.5 to 5 overlaps the claimed range of between 1.9 and 2.1, thereby providing a prima facie case of obviousness. (MPEP 2144.05 PART I)

Second alternative, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of HASHIMOTO with a ratio within the ratio between 1.9 and 2.1, since it has been held that where the general conditions of a claim are



Art Unit: 1775

disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (MPEP 2144.05 PART II-A) *In re Aller*, 105 USPQ 233.

For instant claim 29, HASHIMOTO states at column 8 lines 28-30, "This puddle is subjected to extrusion molding to produce honeycomb segments such as shown in FIG. 2(a) to FIG. 2(c) and FIG. 4(a) to FIG. 7(e)." It is the Examiner's position to extrude a compound implicitly an extrusion die is involved. Therefore, implicitly HASHIMOTO discloses an extrusion die to form his structure.

Also for instant claim 29, the phrase, "by extrusion of a ceramic material" describes a material worked upon and does effectively and structurally differentiate the claim over the prior art.

Also for instant claim 29, HASHIMOTO teaches a formed structure particularly at the figures and column 1 lines 1-10 and column 8 lines 47-51 a plurality of the blocks (2) each comprising a plurality of flow channels, each of the channels being bounded by a side wall.

Also for instant claim 29, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 a first portion (14) of the side wall of a channel (i.e. reinforced channel) has a reinforcement compared to remaining portions of the side wall that form a second portion (10) of the side wall.

Also for instant claim 29, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 a ratio of a thickness of the first portion (14) to a thickness of the second portion (10), in a transverse plane of section.

HASHIMOTO does not specifically teach a ratio of a thickness of said first portion to a thickness of said second portion, in a transverse plane of section, being always between 1.1 and 3

But, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 a ratio of a thickness of the first portion (14) to a thickness of the second portion (10) , in a transverse plane of section, being always between 1.5 to 5 times.

It is the Examiner's position that the range of 1.5 to 5 overlaps the claimed range of between 1.1 and 3, thereby providing a case of anticipation. (MPEP 2131.02 PART II)

Alternatively, it is the Examiner's position that the range of 1.5 to 5 overlaps the claimed range of between 1.1 and 3, thereby providing a prima facie case of obviousness. (MPEP 2144.05 PART I)

As well for instant claim 29, it is the Examiner's position that the thickness of said reinforcing partition of HASHIMOTO is substantially constant. Additionally, it is the Examiner's position that the reinforcement is substantially constant of HASHIMOTO for all the reinforced channels of a group in any transverse plane of section.

Alternatively, Applicant admits on the record at page 1 lines 25-26 of the instant specification, "Conventionally, all the partitions of the two sets have the same thickness, that is, the side wall 22 of any channel 14 has a constant thickness."

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the thickness of the reinforcing partition of HASHIMOTO is substantially constant, and the reinforcement is substantially constant of HASHIMOTO for all the reinforced channels of a group in any transverse plane of section, since it was known in the art that conventionally the side wall (22) of any channel (14) has a constant thickness as admitted by Applicant on the record at page 1 lines 25-26 of the instant specification.

The Examiner notes the instant figure 4,



Art Unit: 1775

[For extrinsic evidence, MATSUBARA et al. (US 6,060,148) teaches particularly at figure 5 an extrusion die usable for the extrusion of the ceramic honeycomb structural body.]

For instant claim 35, HASHIMOTO teaches particularly at figure 2(a) a block presenting the shape of a rectangular parallelepiped.

For instant claim 36, implicitly an intermediately product of HASHIMOTO has all the assembled blocks having the reinforcement along their whole external surface (3). It is noted that HASHIMOTO discloses combining rectangular structures which is then processed to form a columnar honeycomb structure. (particularly see figures and column 9 lines 20-31) The combined rectangular structure, prior to processing to form the column, has all the assembled blocks having the reinforcement along their whole external surface (3). (particularly see figure 5 and column 5 lines 22-33)

HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 wherein the assembled blocks have the reinforcement along their whole external surface (3).

Art Unit: 1775

For instant claim 38, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 wherein the reinforcement of the reinforcing partition is arranged so that, in any transverse plane of section, a flow cross section of a reinforced (14) inlet channel and a reinforced (14) outlet channel are substantially identical to those of the other inlet and outlet channels.

For instant claim 39, HASHIMOTO does not specifically teach the ratio is substantially equal to 2

But, HASHIMOTO teaches particularly at the figures and column 5 lines 22-33 a ratio of a thickness of the first portion (14) to a thickness of the second portion (10) between 1.5 to 5 times.

It is the Examiner's position that the range of 1.5 to 5 overlaps the claimed range of substantially equal to 2, thereby providing a case of anticipation. (MPEP 2131.02 PART II)

Alternatively, HASHIMOTO states at column 5 lines 27-33, "When the average thickness of the side wall 14 is too large, too large a pressure loss appears and impairment of engine performance, etc. is incurred, which is not preferred. When the average thickness of the side wall 14 is too small, the meritorious effects of the present invention are not obtained sufficiently."

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a ratio is substantially equal to 2 with the device of HASHIMOTO, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. (MPEP 2144.05 II-B) *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

For instant claim 41, HASHIMOTO teaches particularly at the figures and column 8 lines 47-51 wherein the inlet channels have each a shape in a transverse cross-section, the outlet channels each have a shape in a transverse cross-section.

It is the Examiner's position that implicitly, the shape of the inlet channels of HASHIMOTO is different than that of the outlet channels, since HASHIMOTO states at column 3 lines 48-51, "plugging the throughholes alternately at each end of the honeycomb structure."

The alternating plugging of the through holes would provide differing shapes.

For instant claim 42, HASHIMOTO teaches particularly at the figures and abstract a block presenting the shape of a rectangular parallelepiped.

In the alternative, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see ***In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).**

19. Claims 30 and 34 rejected under 35 U.S.C. 102(b) as anticipated by HASHIMOTO et al. (JP 2003/010616) ("HASHIMOTO") or, in the alternative, under 35 U.S.C. 103(a) as obvious over HASHIMOTO et al. (JP 2003/010616) ("HASHIMOTO") in view of MATSUBARA et al. (US 6,060,148) ("MATSUBARA")

For instant claims 30 and 34, HASHIMOTO states at column 8 lines 28-30, "This puddle is subjected to extrusion molding to produce honeycomb segments such as shown in FIG. 2(a) to FIG. 2(c) and FIG. 4(a) to FIG. 7(e)," (i.e. extrusion of a ceramic material through a die to form a porous honeycomb structure).

Alternatively, MATSUBARA teaches particularly at column 2 lines 48-51 and figure 5 an extrusion die usable for the extrusion of the ceramic honeycomb structural body.



It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the die of MATSUBARA in a suitable configuration to form the honeycomb structure of HASHIMOTO, for the benefit of forming the structure of HASHIMOTO.

Also for instant claims 30 and 34, HASHIMOTO teaches particularly at column 8 lines 47-51 alternate plugging on an upstream face and on a downstream face.

Also for instant claims 30 and 34, HASHIMOTO teaches particularly at column 8 line 56 drying and firing (i.e. sintering) of the plugged porous structure to obtain the filter block.

### ***Response to Arguments***

20. Applicant's arguments filed 19 November 2010 have been fully considered but they are not persuasive.

21. Applicant argues at page 11 last paragraph – page 12 third paragraph that amendment to claim 36 overcomes the rejection.

a. Respectfully, the Examiner does not find the argument persuasive.

Respectfully, the mere assertion that the amendment has support does not overcome the rejection.

22. Applicant argues at page 10 third paragraph – page 11 third paragraph, "it is respectfully submitted that the full recitation of the indicated phrase recites 'each of said channels being bounded by a side wall'[sic] It is respectfully submitted that the description filed with the application makes clear that each channel is limited by a side wall which may have several portions (for instance for a channel with a square cross-section, the side wall comprises the four planar portions)."

a. Respectfully, the Examiner does not find the argument persuasive. The indefinites caused by the inconsistency with the disclosure describing multiple walls and the claims describing only a single wall remains.

23. The Applicant argues at the second section D new claim limitations. The Applicant is invited to review the above rejections directed to the new claim limitations.

### ***Conclusion***

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY SHUMATE whose telephone number is (571)270-5546. The examiner can normally be reached on M-Th 9-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Marcheschi can be reached on (571)272-1374. The fax phone

Art Unit: 1775

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. S./  
Examiner, Art Unit 1775

/Jason M. Greene/  
Primary Examiner, Art Unit 1775